

| | |
|---|-----------|
| I. REAL PARTY IN INTEREST | 1 |
| II. RELATED APPEALS AND INTERFERENCES | 1 |
| III. STATUS OF CLAIMS..... | 2 |
| IV. STATUS OF AMENDMENTS | 2 |
| V. SUMMARY OF CLAIMED SUBJECT MATTER..... | 2 |
| VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL..... | 2 |
| VII. ARGUMENT..... | 3 |
| VIII. CLAIMS APPENDIX | 13 |
| IX. EVIDENCE APPENDIX | 18 |
| X. RELATED PROCEEDINGS APPENDIX | 19 |

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

| | | |
|---|---|---------------------------|
| In re Application of | : | Customer Number: 46320 |
| | : | |
| Kyle BROWN, et al. | : | Confirmation Number: 8874 |
| | : | |
| Application No.: 10/055,546 | : | Group Art Unit: 2194 |
| | : | |
| Filed: January 23, 2002 | : | Examiner: G. Opie |
| | : | |
| For: MULTI-PROTOCOL OBJECT DISTRIBUTION | : | |

APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Appeal Brief is submitted in support of the Notice of Appeal filed September 5, 2006, wherein Appellants appeal from the Examiner's rejection of claims 1-13.

I. REAL PARTY IN INTEREST

This application is assigned to IBM Corporation by assignment recorded on January 23, 2002, at Reel 012560, Frame 0278.

II. RELATED APPEALS AND INTERFERENCES

Appellants are unaware of any related appeals and interferences.

III. STATUS OF CLAIMS

Claims 1-13 are pending and finally rejected in this Application. It is from the final rejection of claims 1-13 that this Appeal is taken.

IV. STATUS OF AMENDMENTS

The claims have not been amended subsequent to the imposition of the Fourth Office Action dated June 5, 2006 (hereinafter the Fourth Office Action).

V. SUMMARY OF CLAIMED SUBJECT MATTER

Referring to Figure 2 and independent claims 6 and 10, a remote procedure call (RPC) processing method in a multi-protocol object distribution system is disclosed. In step 202, a communicative link is established with the distributed object using a default RPC transport mechanism (page 9, lines 1-3 of Applicants' disclosure). In step 204, the distributed object is then queried over the communicative link for other RPC transport mechanisms which are supported by the server (page 9, lines 7-9). In step 208, one of the other RPC transport mechanisms is selected (page 9, lines 10-12), and in step 210 the communicative link is re-established with the distributed object using the selected RPC transport mechanism (page 9, lines 12-13). In step 216, the RPC request for services from the distributed object over the re-established communicative link is processed (page 9, lines 19-20).

Referring to Figure 1 and independent claim 1, a multi-protocol object distribution system is disclosed. The system includes a plurality of remote procedure call (RPC) transport protocol stubs 106, 108, 110, and a meta-stub 104 (page 7, line 22 through page 8, line 1). The meta stub 104 is configured to establish a communicative link with a distributed object 118 using

a default RPC transport stub (page 9, lines 1-3). The meta stub 104 also selects individual ones of the RPC transport protocol stubs 106, 108, 110 through which distributed object services 118 can be provided to requesting clients 100 in the object distribution system (page 8, lines 18-21). The meta stub 104 further reestablishes the communicative link using the selected individual one of the RPC protocol stubs 106, 108, 110 (page 9, lines 12-13).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. Claims 1-2, 6-7, 9-11, and 13 were rejected under the 35 U.S.C. § 103 for obviousness based upon Moore et al., U.S. Patent No. 6,408,342, in view of Sundius et al., U.S. Patent Publication No. 2003/0023577 (hereinafter Sundius); and

2. Claims 3-5, 8 and 12 were rejected under 35 U.S.C. § 103 for obviousness based upon Moore in view of Sundius and further in view of Mein et al., U.S. Patent No. 6,782,542.

VII. ARGUMENT

THE REJECTION OF CLAIMS 1-2, 6-7, 9-11, AND 13 UNDER 35 U.S.C. § 103 FOR OBVIOUSNESS BASED UPON MOORE IN VIEW OF SUNDIUS

For convenience of the Honorable Board in addressing the rejections, claims 1-2, 7, 9-11, and 13 stand or fall together with independent claim 6.

Claims 6 and 10

Independent claims 6 and 12 each recite the following limitation:

establishing a communicative link with said distributed object using a default RPC transport mechanism ...

selecting one said other RPC transport mechanisms and re-establishing said communicative link with said distributed object using said selected RPC transport mechanism

Thus, claims 6 and 10 recite two instances in which the communicative link is established. The first instance is with the default RPC transport mechanism and the second instance is with the selected RPC transport mechanism.

To teach the claimed "establishing a communicative link ... using a default RPC transport mechanism," the Examiner cited column 20, lines 2-5 and Fig. 12 of Moore. For ease of reference column 19, line 66 through column 20, line 6 of Moore is reproduced below:

FIG. 12 is a flow chart illustrating the operation of the decision logic of the Stub 303. The decision logic commences operation when the Stub object receives a remote method invocation, step 601. As a preliminary step, if there is a current binding for the ObjectReference 501, the decision logic attempts to establish the connection using that current binding, 603. If step 603 is successful, step 605, the procedure terminates with success, step 607.

This very passage cited by the Examiner teaches away from the claimed invention. Claims 6 and 10 recite that the communicative link is established with a default RPC transport mechanism. However, Moore teaches that if a connection is established with the current binding (i.e., the asserted default RPC transport mechanism) in step 605 then "the procedure terminates with success, step 607." Thus, one having ordinary skill in the art would not have been motivated to modify Moore to "[select] one of said other RPC transport mechanisms and re-establish said communicative link with said distributed object using said selected RPC transport mechanism" because Moore teaches that the connection process is terminated if a connection is established with the current binding.

To teach the claimed "querying said distributed object over said communicative link for other RPC transport mechanisms which are supported by said server," the Examiner cited column 21, lines 8-10 and 36-43 and column 21, lines 9-10 of Moore. Appellants submit that the Examiner has grossly misstated the teachings of Moore: For example, column 21, lines 6-10 is reproduced below:

Otherwise, if the decision logic failed to establish a connection with the binding information from the locator, step 619, the decision logic attempts making the connection by querying the various registered RPC_Transports 305 (e.g., those registered in the supported protocols list 417) to determine if one of those RPC_Transports 305 can establish the connection using an RPC_Transport dependent location mechanism, steps 623-629. (emphasis added)

The Examiner's asserted "querying the various registered RPC_Transports 305" only occurs if the decision logic failed to establish a connection. The claimed invention, however, recites that the communicative link is established with the distributed object using a default RPC transport mechanism, and as already noted above, Moore teaches that the process is terminated if a connection is established. Therefore, step 619 (described above) is never reached in Fig. 12 since the process is "Done" in step 607. The discussion of the steps in column 21, lines 36-43 are also never reached since the process is "Done" is step 607.

To teach the claimed "selecting one said other RPC transport mechanisms," the Examiner cited column 19, lines 51-54 of Moore, which for ease of reference is reproduced below:

If the target object is accessible over multiple protocols (i.e., both the client and the server support more than one protocol in common), the protocol with the matching the Quality of Service (QoS) required by the Stub 303 is selected.

It is readily apparent that one having ordinary skill in the art would not have considered that the Examiner's above-cited passage within Moore discloses the claimed "selecting one said other RPC transport mechanisms." This passage refers back to the "other RPC transport mechanisms" which were obtained over the communicative link established using the default RPC. Therefore,

to identically disclose the claimed invention, the Examiner must establish that Moore teaches that the selection of the protocol with a matching QoS is performed after steps 605 and 607 are performed (i.e., the Examiner's asserted "establishing a communicative link ... using a default RPC transport mechanism"). The Examiner, however, has not made this factual finding.

Instead, it is readily apparent that this selection of a protocol with a matching QoS must be performed prior to steps 605 and 607. Assuming, for sake of argument, that the selection of a protocol with a matching QoS is performed after steps 605 and 607, this selection has no purpose. Moore teaches that the connection process is terminated once a connection is established with the current binding (i.e., steps 605 and 607), and Moore does not teach reconnecting. Therefore, interpreting Moore in the manner asserted by the Examiner suggests that Moore knowingly teaches a completely useless step.

A proper interpretation of Moore yields that the selection of a protocol with a matching QoS is found within the section entitled "Decision Logic," and Fig. 12 is described by Moore as "a flow chart illustrating the operation of the decision logic of the Stub" (column 6, lines 5-6). As described in column 19, line 38 through column 20, line 9, the decision logic of the Stub object 303 uses profiles stored in the ObjectReference 501 to establish a connection to the target object. The decision logic selects a profile that comes closest to being able to deliver the desired QoS. Since, as illustrated in Figs. 12 and 13, once a connection is made, then the process is considered to be "Done," it is apparent that selection of a protocol with a matching QoS occurs prior to any connection being attempted. Thus, column 19, lines 51-54 of Moore fails to teach

the claimed "selecting one said other RPC transport mechanism," which occurs after a communicative link has been established using a default RPC transport mechanism.

The Examiner asserted that Moore teaches the claimed "re-establishing said communicative link with said distributed object using said selected RPC transport mechanism," but this appears to be an oversight by the Examiner, who has "cut and pasted" entire passages from the prior Office Action. As noted by the Examiner with regard to claim 1 and also with regard to claims 6 and 10, the Examiner relied upon Sundius to teach this step.

In the paragraphs spanning pages 4 and 5 of the Office Action, the Examiner asserted that Sundius teaches the claimed "re-establishing said communicative link with said distributed object using said selected RPC transport mechanism" and cited paragraph [0087] of Sundius for support. For ease of reference, this paragraph is reproduced below:

FIG. 4 shows the interfaces as they would be used on the server side in an actual application. As the incoming message is received on the server side, the ProtocolAdapter 40 "accepts" the connection when it recognizes that the server has at least one Listener 42 that understands any of the protocols that the client supports. The incoming message encodes all the protocols that the client supports, and as a result of the bind process, a protocol that both client and server can understand is selected. As a result of the connection being established, the designated listener for the established protocol will be waiting for further incoming calls on the connection, until the connection expires. For each request the listener 42 receives, the dispatcher 44 allocates a thread to service the request, according to its own internal algorithm. Such execution thread then turns to the skeleton 46 (generated code on the server side from the original IDL), which in turn delegates to the user code 48 for execution of the request. Replies follow the same route and responses go back to the client using the same connection and the same protocol as the request.

Upon reviewing this passage, Appellants can find no teaching with Sundius (either alone or in combination with Moore) comparable to the claimed "re-establishing said communicative link with said distributed object using said selected RPC transport mechanism." Sundius is completely silent about reestablishing a communicative link. Instead, Sundius teaches that "as a result of the bind process, a protocol that both client and server can understand is selected" and

"[r]eplies follow the same route and responses go back to the client using the same connection and the same protocol as the request." Therefore, even if one having ordinary skill in the art would have been motivated to modify Moore in view of Sundius, the claimed invention would not result.

With regard to the requisite motivation to modify Moore in view of Sundius to arrive at the claimed invention, the Examiner stated the following:

It would have been obvious to combine Sundius'es [sic] teachings with Moore because the conversion facility via multiply proxy/stub objects would greatly increase the capability of client/server communications.

In rejecting a claim under 35 U.S.C. § 103, the Examiner is required to identify a source in the applied prior art for: (1) claim limitations; and (2) the motivation to combine references or modify a reference in the reasonable expectation of achieving a particular benefit. The Examiner, however, has failed to identify where within the applied prior art, the Examiner's proposed motivation can be found. Moreover, upon reviewing the Examiner's asserted motivation, it is not readily apparent what this motivation has to do with modifying the teachings of Moore so as to reestablishing a communicative link with a distributed object using a selected RPC transport mechanism, as recited in the claims. The Examiner must establish that the asserted motivation/benefit is related to the proposed modification, but it is not apparent that this has been accomplished. Appellants, therefore, submit that the Examiner has failed to establish a proper motivation to modify Moore in view of Sundius.

Claim 1

Claim 1 recites that a meta-stub is configured to establish a communicative link with a distributed object using a default RPC transport stub and also to reestablish the communicative link using a selected RPC transport stub. Therefore, claim 1 includes comparable limitations to those limitations found in claims 6 and 10 that Appellants have argued are not identically disclosed by the combination of Moore and Sundius.

The above arguments were previously presented by Appellants in the Response filed March 17, 2006, which responded to the rejection found in the Third Office Action dated January 11, 2006 (hereinafter the Third Office Action). The statement of the rejection in the Fourth Office Action is substantially the same as the statement of the rejection found in the Third Office Action. The Examiner purportedly responded to these arguments on page 7 and 8 of the Fourth Office Action. However, as will be described in more detail below, the Examiner's "Response to Applicant's Arguments" is essentially non-responsive.

In the first full paragraph on page 7 of the Fourth Office Action, the Examiner cited In re Hyatt for the proposition that "pending claims must be 'given their broadest reasonable interpretation consistent with the specification.'" Although literally correct, this assertion with regard to claim construction is incomplete. In determining the proper construction for a term in a claim, the Federal Circuit in Intellectual Property Development, Inc. v. UA-Columbia Cablevision of Westchester, Inc.¹ stated the following:

The words used in the claims are examined from the perspective of a person skilled in the art. [citation omitted] In the absence of an express intent to impart a novel meaning to claim terms, the words are presumed to take on the ordinary and customary meanings attributed to them by

¹ 336 F. 3d 1308 (Fed. Cir. 2003).

those of ordinary skill in the art. [citation omitted] The ordinary and customary meaning of a claim term may be determined by reviewing a variety of sources. [citation omitted] Some of these sources include the claims themselves [citation omitted]; dictionaries and treatises [citation omitted]; and the written description, the drawings, and the prosecution history.

As noted above, the "broadest" interpretation of a term must also be one that takes on the ordinary and customary meaning attributed to that by one having ordinary skill in the art.

The Examiner's second full paragraph on page 7 of the Fourth Office Action is a general denial of Appellants' arguments followed by the assertion that "the referenced prior art teachings from Sundius and Moore do meet the claimed RPC connectivity provisions to facilitate object interactions."

In the Examiner's third full paragraph on page 7 of the Fourth Office Action, the Examiner further asserted the following:

The scope of the claimed "RPC transport mechanism" clearly transcends the more narrow scope that Applicant attempts to impute through argument ... The claimed "communicative link" elements are clearly subject to a broad interpretation, as detailed in the rejections maintained above.

Despite these assertions, the Examiner neither identifies the "the more narrow scope that Applicant attempts to impute through argument" or why this "narrow" scope is improper. Moreover, although the Examiner's asserts that the "claimed 'communicative link' are clearly subject to a broad interpretation," the Examiner's analysis fails to specifically specify this broad interpretation or why this broad interpretation is justified. In this regard, Appellants submit that the Examiner's response is nothing more than a general denial without supporting analysis.

In the fourth full paragraph on page 7 of the Fourth Office Action, the Examiner cites to case law that support the notion that limitations, not recited, but appearing in the specification,

should not be read into the claims. However, the Examiner has again failed to explain why this case law is relevant to the facts of the present application.

In the first full paragraph on page 8 of the Office Action, the Examiner noted that "Applicant also argues that the Sundius and Moore teachings lack proper motivation for the subject combination as set forth supra." The Examiner followed this up by citing substantial case law. However, as evident throughout the Examiner's alleged "Response to Applicant's Arguments," the Examiner has again failed to explain the relevance of these cited cases to the facts of the present invention.

**THE REJECTION OF CLAIMS 3-5, 8, AND 12 UNDER 35 U.S.C. § 103 FOR OBVIOUSNESS
BASED UPON MOORE IN VIEW OF SUNDIUS AND MEIN**

For convenience of the Honorable Board in addressing the rejections, claims 3-5, 8, and 12 stand or fall together with independent claim 6.

Claims 3-5, 8, and 12 depend ultimately from independent claims 1, 6 or 10, and Appellants incorporate herein the arguments previously advanced in traversing the imposed rejection of claims 1, 6 and 10 under 35 U.S.C. § 103 for obviousness based upon Moore in view of Sundius. Specifically, one having ordinary skill in the art would have not arrived at the claimed invention based upon the combination of Moore and Sundius. The tertiary reference to Mein does not cure the argued deficiencies of the combination of Moore and Sundius. Accordingly, the proposed combination of references would not yield the claimed invention. Appellants, therefore,

respectfully submit that the imposed rejection of claims 3-5, 8, and 12 under 35 U.S.C. § 103 for obviousness based upon Moore in view of Sundius and Mein is not viable.

Conclusion

Based upon the foregoing, Appellants respectfully submit that the Examiner's rejections under 35 U.S.C. § 103 based upon the applied prior art is not viable. Appellants, therefore, respectfully solicit the Honorable Board to reverse the Examiner's rejections under 35 U.S.C. § 103.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due under 37 C.F.R. §§ 1.17, 41.20, and in connection with the filing of this paper, including extension of time fees, to Deposit Account 09-0461, and please credit any excess fees to such deposit account.

Date: November 6, 2006

Respectfully submitted,

/Scott D. Paul/

Scott D. Paul
Registration No. 42,984
Steven M. Greenberg
Registration No. 44,725
CUSTOMER NUMBER 46320

VIII. CLAIMS APPENDIX

1. A multi-protocol object distribution system comprising:
a plurality of remote procedure call (RPC) transport protocol stubs; and,
a meta-stub configured to
establish a communicative link with a distributed object using a default RPC
transport stub,
select individual ones of said RPC transport protocol stubs through which
distributed object services can be provided to requesting clients in the object distribution
system, and
reestablish said communicative link using said selected individual one of said RPC
protocol stubs.
2. The system of claim 1, wherein said RPC transport protocol stubs comprise:
the default RPC transport stub, said meta-stub having a further configuration for
automatically selecting said default RPC transport stub by default; and,
at least one other RPC transport stub which said meta-stub can select based upon changing
conditions in said object distribution system.
3. The system of claim 1, wherein at least one of said RPC transport protocol stubs
comprises a simple object access protocol (SOAP) over hypertext transfer protocol (HTTP) stub.

4. The system of claim 2, wherein said default RPC transport protocol stub comprises a SOAP over HTTP stub.

5. The system of claim 3, wherein said RCP transport protocol stubs further comprises at least one other RPC transport protocol stub selected from the group consisting of a remote method invocation (RMI) over Internet Inter-ORB Protocol (IIOP) stub, a SOAP over Java Message Service (JMS)/Message Queue (MQ) stub, and a simple mail transport protocol (SMTP) over JMS stub.

6. In a multi-protocol object distribution system, a remote procedure call (RPC) processing method comprising:

receiving an RPC request for services from a distributed object in a server in the multi-protocol object distribution system;

establishing a communicative link with said distributed object using a default RPC transport mechanism, and querying said distributed object over said communicative link for other RPC transport mechanisms which are supported by said server;

selecting one said other RPC transport mechanisms and re-establishing said communicative link with said distributed object using said selected RPC transport mechanism; and,

processing said RPC request for services from said distributed object over said re-established communicative link.

7. The method of claim 6, further comprising:

detecting a deterioration in communications over said re-established communicative link;
further re-establishing said communicative link with said default RPC transport mechanism; and,
continuing to process said RPC request for services over said further re-established communicative link.

8. The method of claim 6, wherein said selecting step comprises:
determining whether said RPC request for services implicates asynchronous or synchronous messaging; and,
selecting an optimal RPC transport mechanism supported by said server based upon said determination.

9. The method of claim 6, wherein said selecting step comprises:
surveying network conditions; and,
selecting one of said RPC transport mechanisms best suited to provide a pre-determined level of Quality of Service (QoS) in view of said surveyed network conditions.

10. A machine readable storage having stored thereon a computer program for performing remote procedure call (RPC) processing in a multi-protocol object distribution system, the computer program comprising a routine set of instructions for causing the machine to perform the steps of:

receiving an RPC request for services from a distributed object in a server in the multi-protocol object distribution system;

establishing a communicative link with said distributed object using a default RPC transport mechanism, and querying said distributed object over said communicative link for other RPC transport mechanisms which are supported by said server;

selecting one said other RPC transport mechanisms and re-establishing said communicative link with said distributed object using said selected RPC transport mechanism; and,

processing said RPC request for services from said distributed object over said re-established communicative link.

11. The machine readable storage of claim 10, further comprising:

detecting a deterioration in communications over said re-established communicative link; further re-establishing said communicative link with said default RPC transport mechanism; and,

continuing to process said RPC request for services over said further re-established communicative link.

12. The machine readable storage of claim 10, wherein said selecting step comprises:

determining whether said RPC request for services implicates asynchronous or synchronous messaging; and,

selecting an optimal RPC transport mechanism supported by said server based upon said determination.

13. The machine readable storage of claim 10, wherein said selecting step comprises:

surveying network conditions; and,

selecting one of said RPC transport mechanisms best suited to provide a pre-determined level of Quality of Service (QoS) in view of said surveyed network conditions.

IX. EVIDENCE APPENDIX

No evidence submitted pursuant to 37 C.F.R. §§ 1.130, 1.131, or 1.132 of this title or of any other evidence entered by the Examiner has been relied upon by Appellants in this Appeal, and thus no evidence is attached hereto.

X. RELATED PROCEEDINGS APPENDIX

Since Appellants are unaware of any related appeals and interferences, no decision rendered by a court or the Board is attached hereto.